FIG. 1

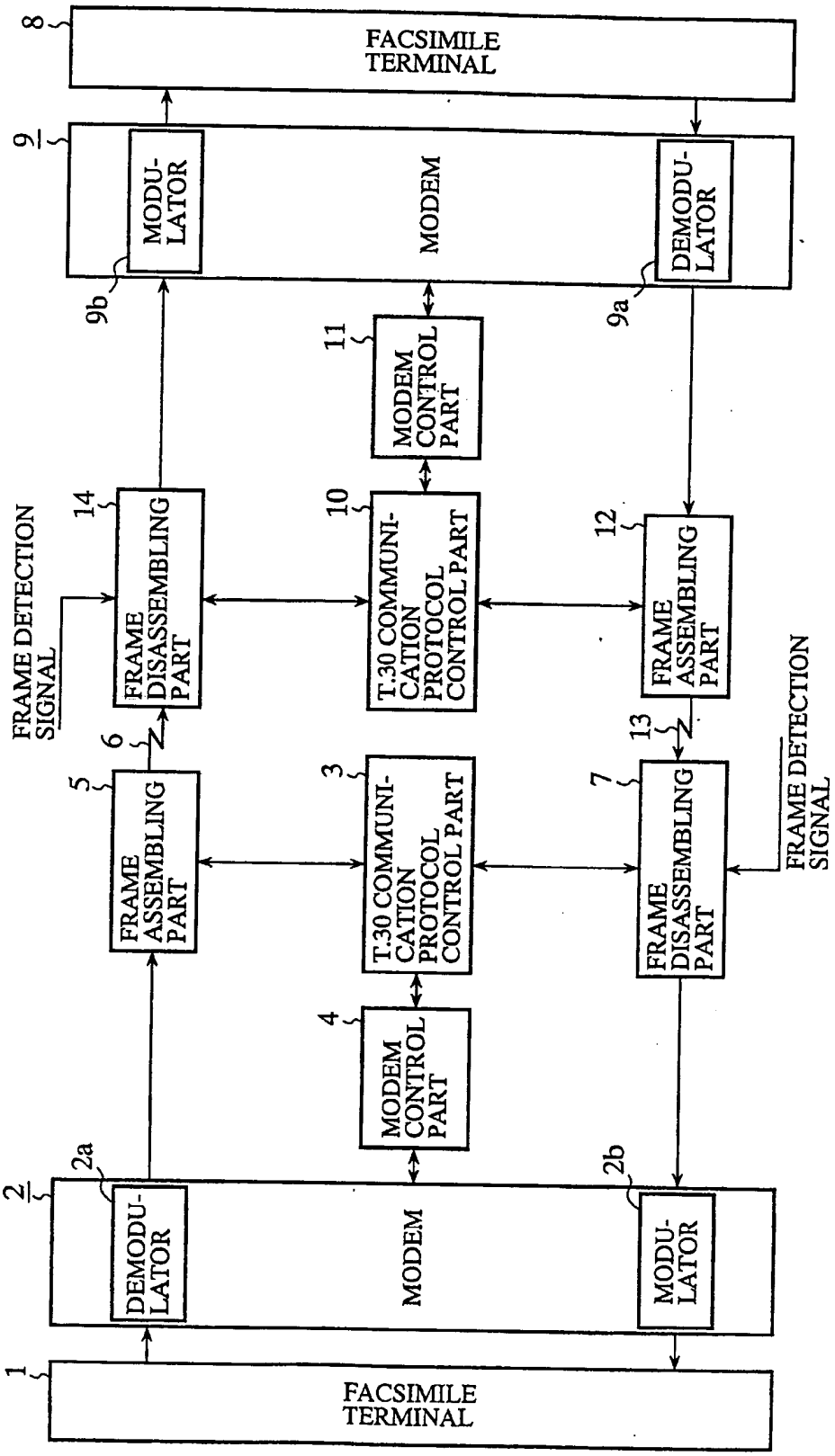

8
FACSIMILE TERMINAL
9
MODU-LATOR
MODEM
DEMODU-LATOR
9b
9a
11
MODEM CONTROL PART
14
FRAME DISASSEMBLING PART
10
T.30 COMMUNI-CATION PROTOCOL CONTROL PART
12
FRAME ASSEMBLING PART
FRAME DETECTION SIGNAL
6
13
5
3
7
FRAME ASSEMBLING PART
T.30 COMMUNI-CATION PROTOCOL CONTROL PART
FRAME DISASSEMBLING PART
FRAME DETECTION SIGNAL
4
MODEM CONTROL PART
2a
2b
2
DEMODU-LATOR
MODEM
MODU-LATOR
1
FACSIMILE TERMINAL

FIG.2

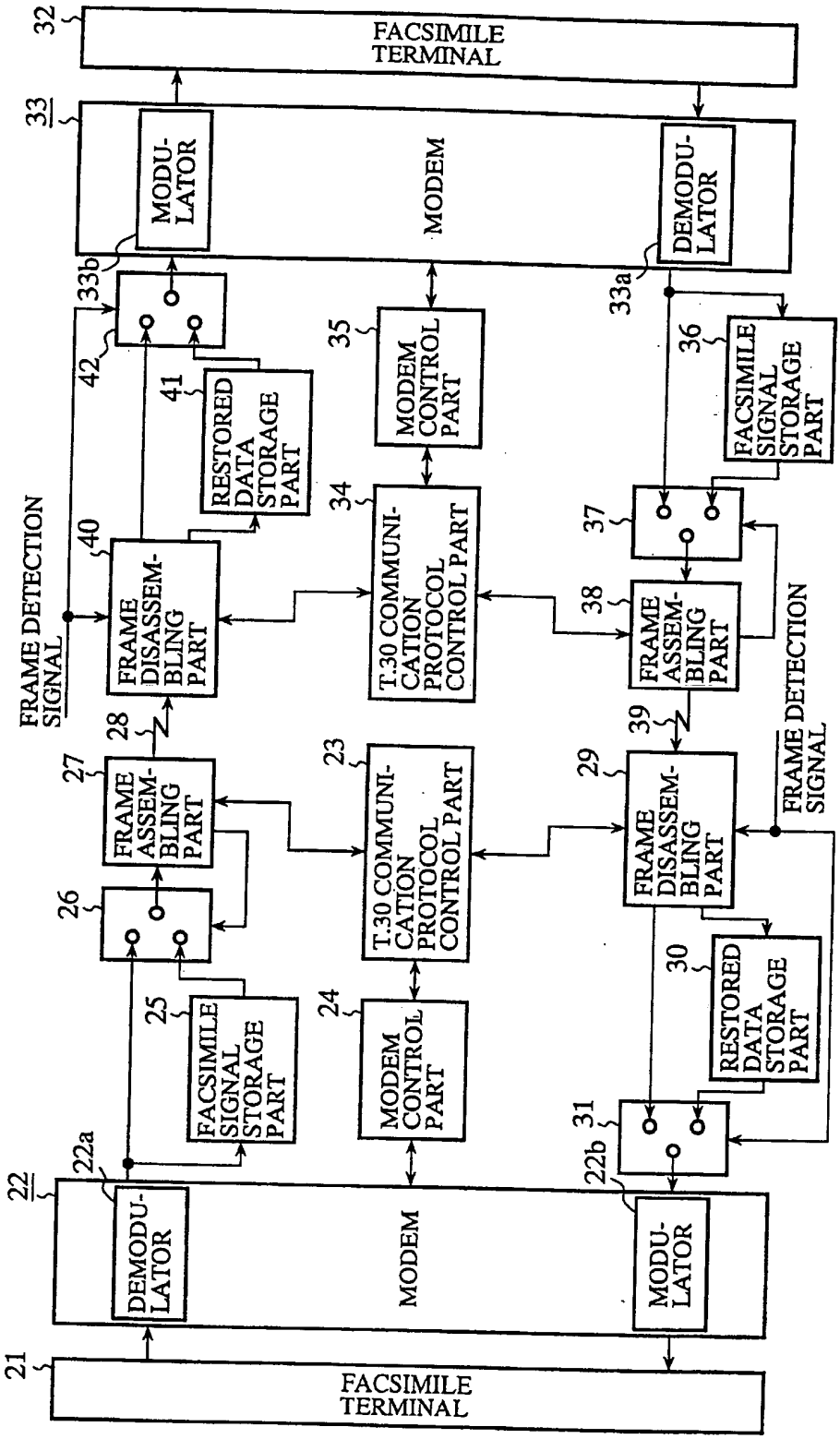

FACSIMILE TERMINAL
MODEM
MODU-LATOR
DEMODU-LATOR
MODEM CONTROL PART
T.30 COMMUNICATION PROTOCOL CONTROL PART
FRAME ASSEMBLING PART
FRAME DISASSEMBLING PART
FACSIMILE SIGNAL STORAGE PART
RESTORED DATA STORAGE PART
FRAME DETECTION SIGNAL
21
22
22a
22b
23
24
25
26
27
28
29
30
31
32
33
33a
33b
34
35
36
37
38
39
40
41
42

FIG.3

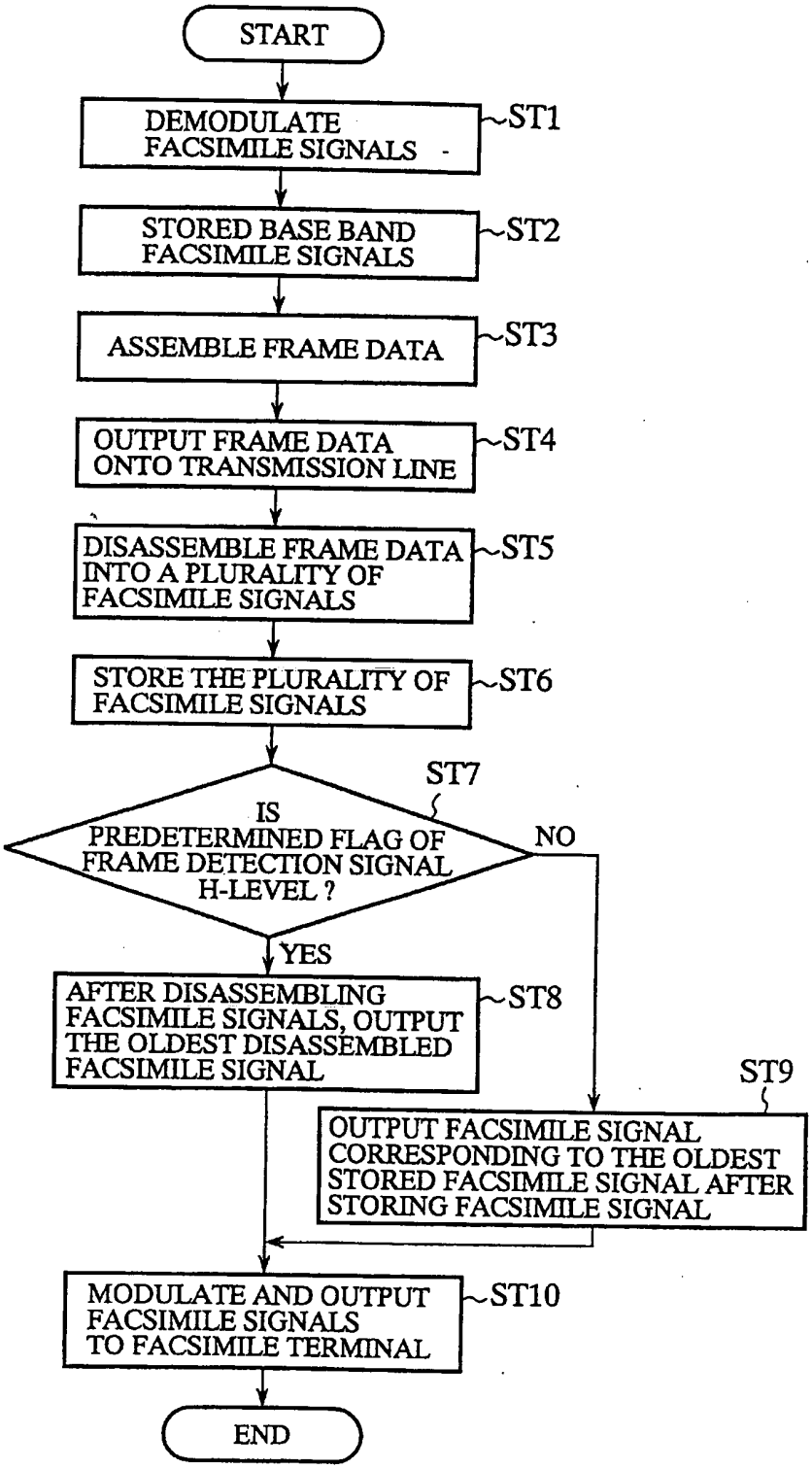

START
DEMODULATE FACSIMILE SIGNALS
ST1
STORED BASE BAND FACSIMILE SIGNALS
ST2
ASSEMBLE FRAME DATA
ST3
OUTPUT FRAME DATA ONTO TRANSMISSION LINE
ST4
DISASSEMBLE FRAME DATA INTO A PLURALITY OF FACSIMILE SIGNALS
ST5
STORE THE PLURALITY OF FACSIMILE SIGNALS
ST6
ST7
IS PREDETERMINED FLAG OF FRAME DETECTION SIGNAL H-LEVEL ?
NO
YES
AFTER DISASSEMBLING FACSIMILE SIGNALS, OUTPUT THE OLDEST DISASSEMBLED FACSIMILE SIGNAL
ST8
ST9
OUTPUT FACSIMILE SIGNAL CORRESPONDING TO THE OLDEST STORED FACSIMILE SIGNAL AFTER STORING FACSIMILE SIGNAL
MODULATE AND OUTPUT FACSIMILE SIGNALS TO FACSIMILE TERMINAL
ST10
END

FIG.4

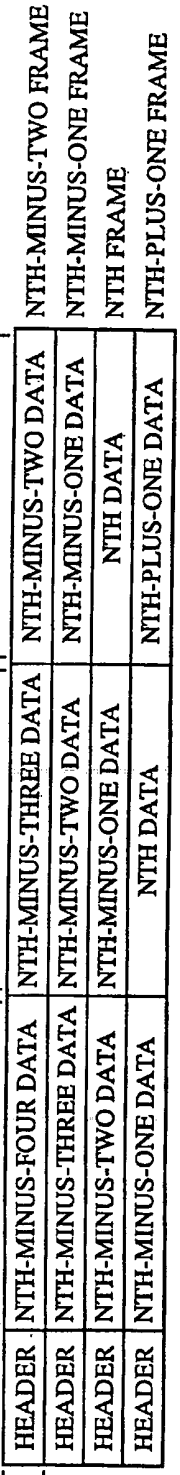

1 FRAME
HEADER
HEADER
HEADER
HEADER
FACSIMILE SIGNALS IN THE CYCLE BEFORE LAST
NTH-MINUS-FOUR DATA
NTH-MINUS-THREE DATA
NTH-MINUS-TWO DATA
NTH-MINUS-ONE DATA
FACSIMILE SIGNALS IN THE PRECEDING CYCLE
NTH-MINUS-THREE DATA
NTH-MINUS-TWO DATA
NTH-MINUS-ONE DATA
NTH DATA
CURRENT FACSIMILE SIGNALS
NTH-MINUS-TWO DATA
NTH-MINUS-ONE DATA
NTH DATA
NTH-PLUS-ONE DATA
NTH-MINUS-TWO FRAME
NTH-MINUS-ONE FRAME
NTH FRAME
NTH-PLUS-ONE FRAME

FIG.5

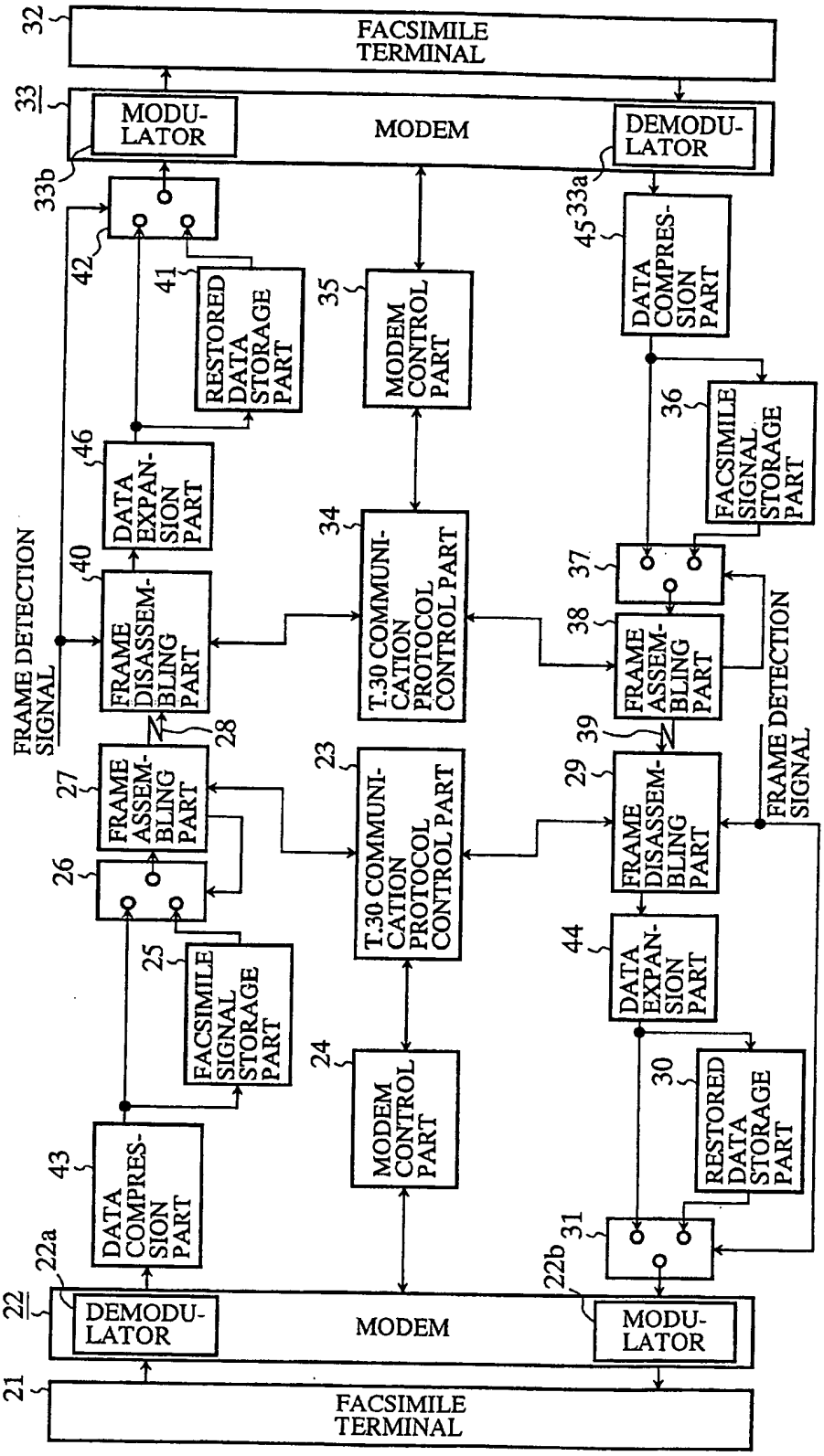

32
FACSIMILE TERMINAL
33
MODU-LATOR
MODEM
DEMODU-LATOR
33b
33a
42
41
RESTORED DATA STORAGE PART
35
MODEM CONTROL PART
45
DATA COMPRES-SION PART
36
FACSIMILE SIGNAL STORAGE PART
46
DATA EXPAN-SION PART
34
T.30 COMMUNI-CATION PROTOCOL CONTROL PART
37
40
FRAME DISASSEM-BLING PART
38
FRAME ASSEM-BLING PART
FRAME DETECTION SIGNAL
28
39
27
23
29
FRAME ASSEM-BLING PART
T.30 COMMUNI-CATION PROTOCOL CONTROL PART
FRAME DISASSEM-BLING PART
FRAME DETECTION SIGNAL
26
44
25
FACSIMILE SIGNAL STORAGE PART
DATA EXPAN-SION PART
24
30
MODEM CONTROL PART
RESTORED DATA STORAGE PART
43
DATA COMPRES-SION PART
22a
22b
31
22
DEMODU-LATOR
MODEM
MODU-LATOR
21
FACSIMILE TERMINAL

FIG.6

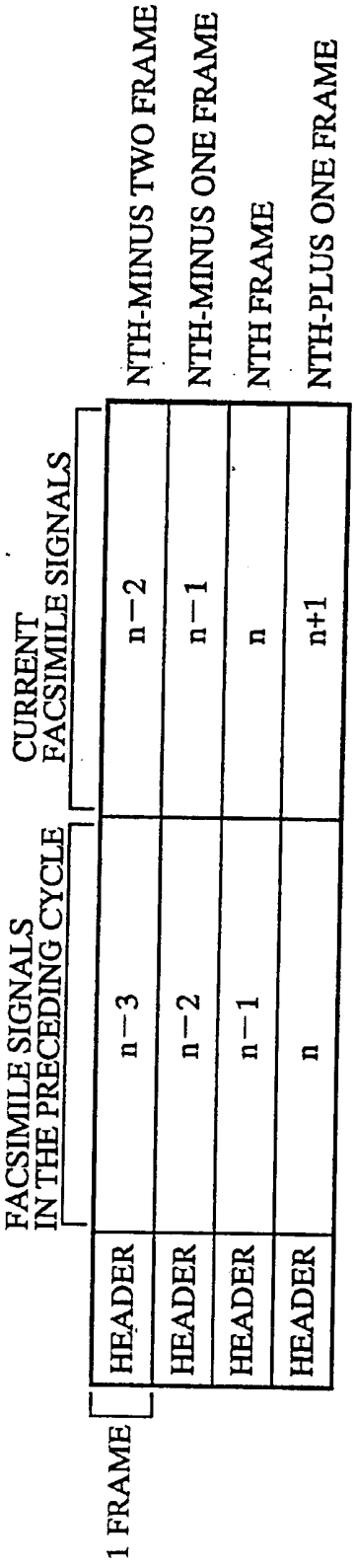

1 FRAME
FACSIMILE SIGNALS IN THE PRECEDING CYCLE
CURRENT FACSIMILE SIGNALS
HEADER
HEADER
HEADER
HEADER
n−3
n−2
n−1
n
n−2
n−1
n
n+1
NTH-MINUS TWO FRAME
NTH-MINUS ONE FRAME
NTH FRAME
NTH-PLUS ONE FRAME

FIG.7

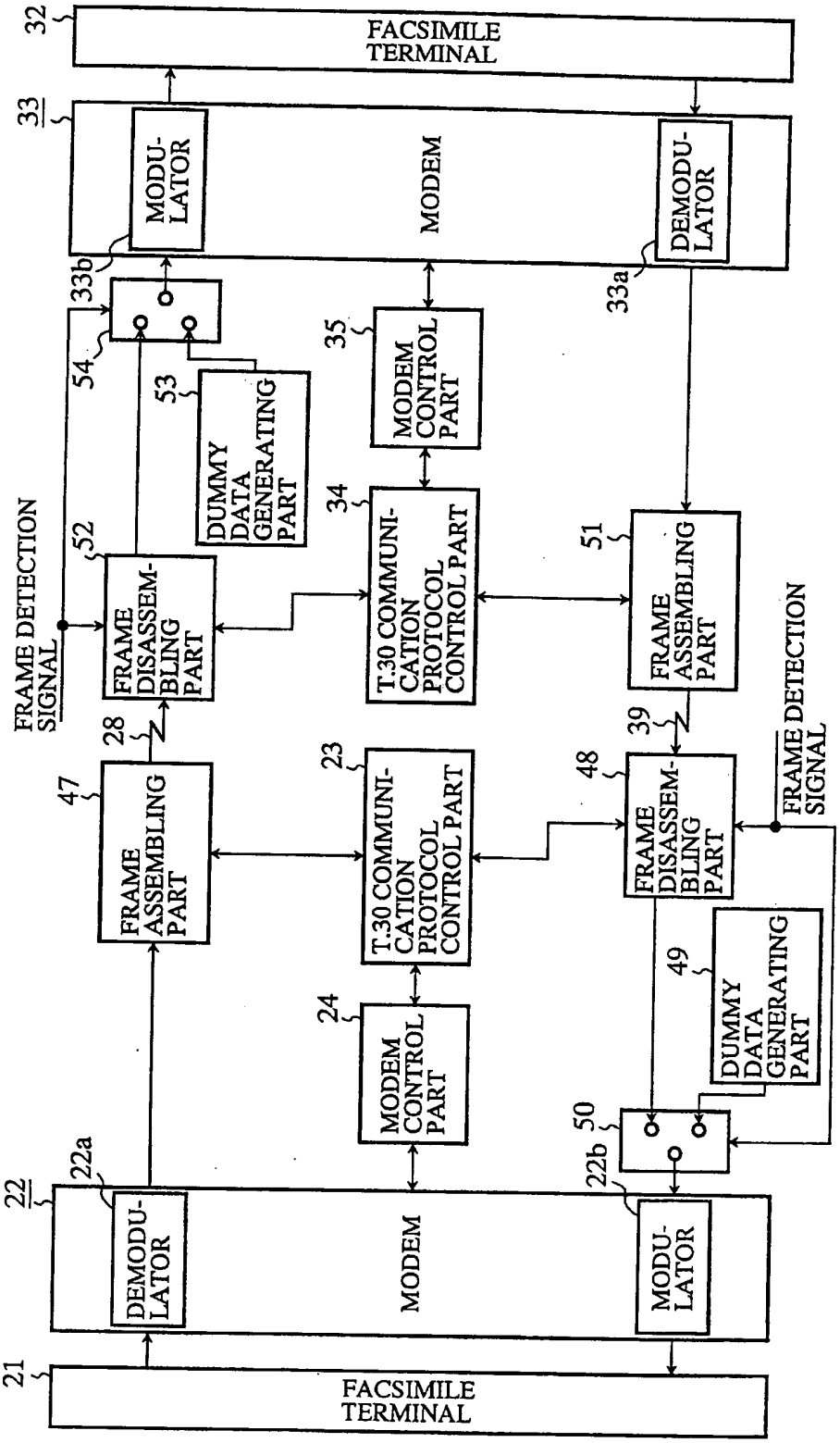

32
FACSIMILE TERMINAL
33
MODU-LATOR
MODEM
DEMODU-LATOR
33b
33a
54
53
DUMMY DATA GENERATING PART
35
MODEM CONTROL PART
34
T.30 COMMUNI-CATION PROTOCOL CONTROL PART
FRAME DETECTION SIGNAL
52
FRAME DISASSEM-BLING PART
51
FRAME ASSEMBLING PART
28
39
47
23
48
FRAME ASSEMBLING PART
T.30 COMMUNI-CATION PROTOCOL CONTROL PART
FRAME DISASSEM-BLING PART
FRAME DETECTION SIGNAL
49
DUMMY DATA GENERATING PART
24
MODEM CONTROL PART
50
22a
22b
22
DEMODU-LATOR
MODEM
MODU-LATOR
21
FACSIMILE TERMINAL

FIG.8

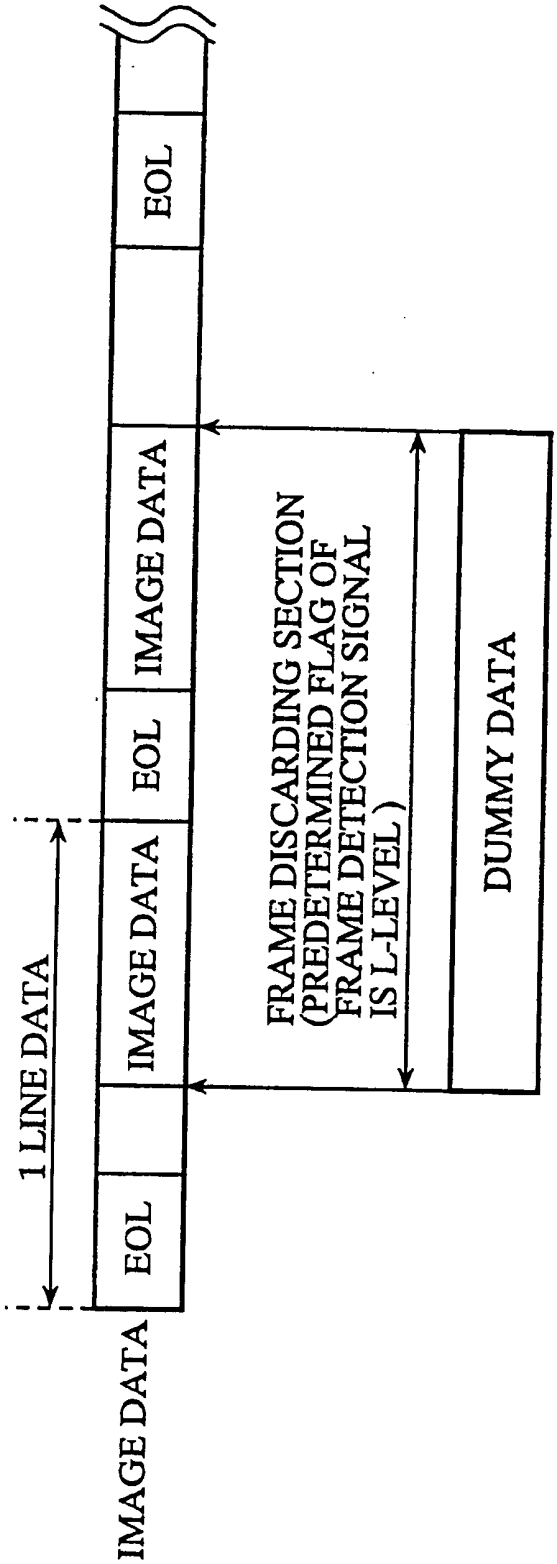

EOL
IMAGE DATA
EOL
IMAGE DATA
EOL
IMAGE DATA
1 LINE DATA
FRAME DISCARDING SECTION
(PREDETERMINED FLAG OF
FRAME DETECTION SIGNAL
IS L-LEVEL)
DUMMY DATA

FIG.9

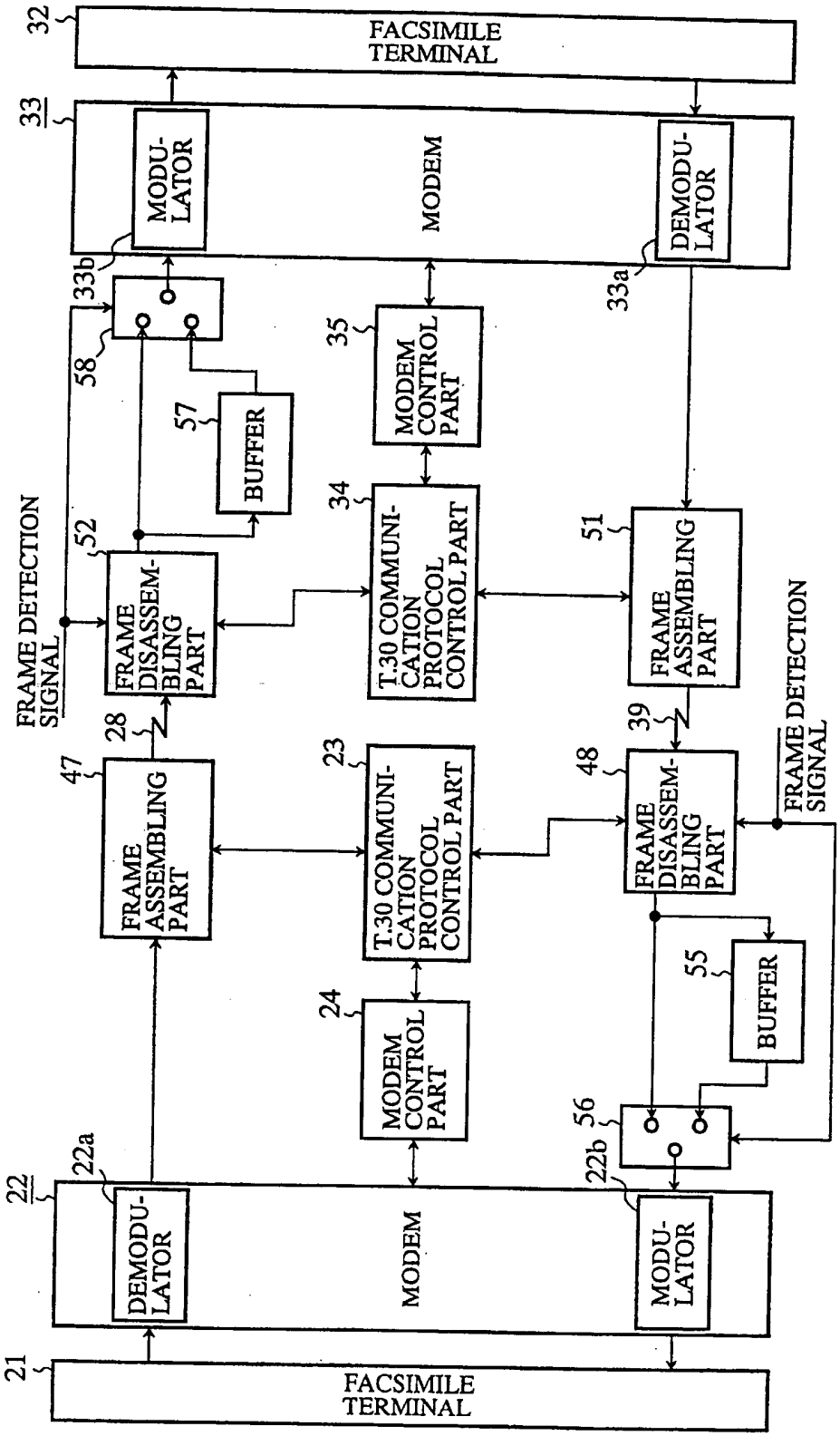

32
FACSIMILE TERMINAL
33
MODU-LATOR
MODEM
DEMODU-LATOR
33b
33a
58
35
MODEM CONTROL PART
57
BUFFER
34
T.30 COMMUNI-CATION PROTOCOL CONTROL PART
51
FRAME ASSEMBLING PART
52
FRAME DISASSEM-BLING PART
FRAME DETECTION SIGNAL
28
39
47
23
48
FRAME ASSEMBLING PART
T.30 COMMUNI-CATION PROTOCOL CONTROL PART
FRAME DISASSEM-BLING PART
FRAME DETECTION SIGNAL
55
BUFFER
24
MODEM CONTROL PART
56
22a
22b
22
DEMODU-LATOR
MODEM
MODU-LATOR
21
FACSIMILE TERMINAL

FIG.10

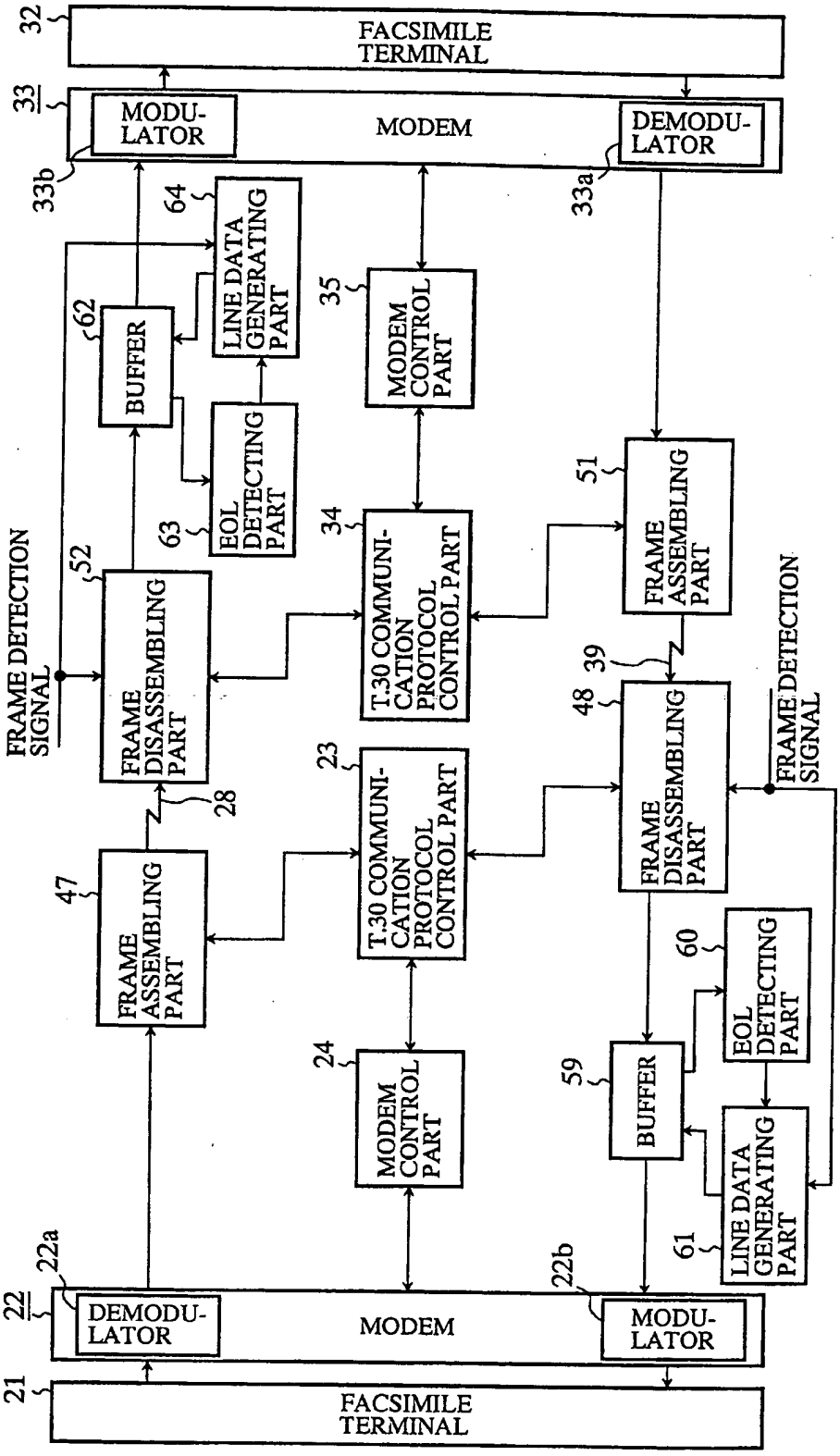

32
FACSIMILE TERMINAL
33
MODU-LATOR
MODEM
DEMODU-LATOR
33b
33a
64
LINE DATA GENERATING PART
35
MODEM CONTROL PART
62
BUFFER
51
FRAME ASSEMBLING PART
63
EOL DETECTING PART
34
T.30 COMMUNI-CATION PROTOCOL CONTROL PART
FRAME DETECTION SIGNAL
52
FRAME DISASSEMBLING PART
39
48
FRAME DISASSEMBLING PART
FRAME DETECTION SIGNAL
23
T.30 COMMUNI-CATION PROTOCOL CONTROL PART
28
47
FRAME ASSEMBLING PART
60
EOL DETECTING PART
24
MODEM CONTROL PART
59
BUFFER
LINE DATA GENERATING PART
61
22a
22b
22
DEMODU-LATOR
MODEM
MODU-LATOR
21
FACSIMILE TERMINAL

FIG.11

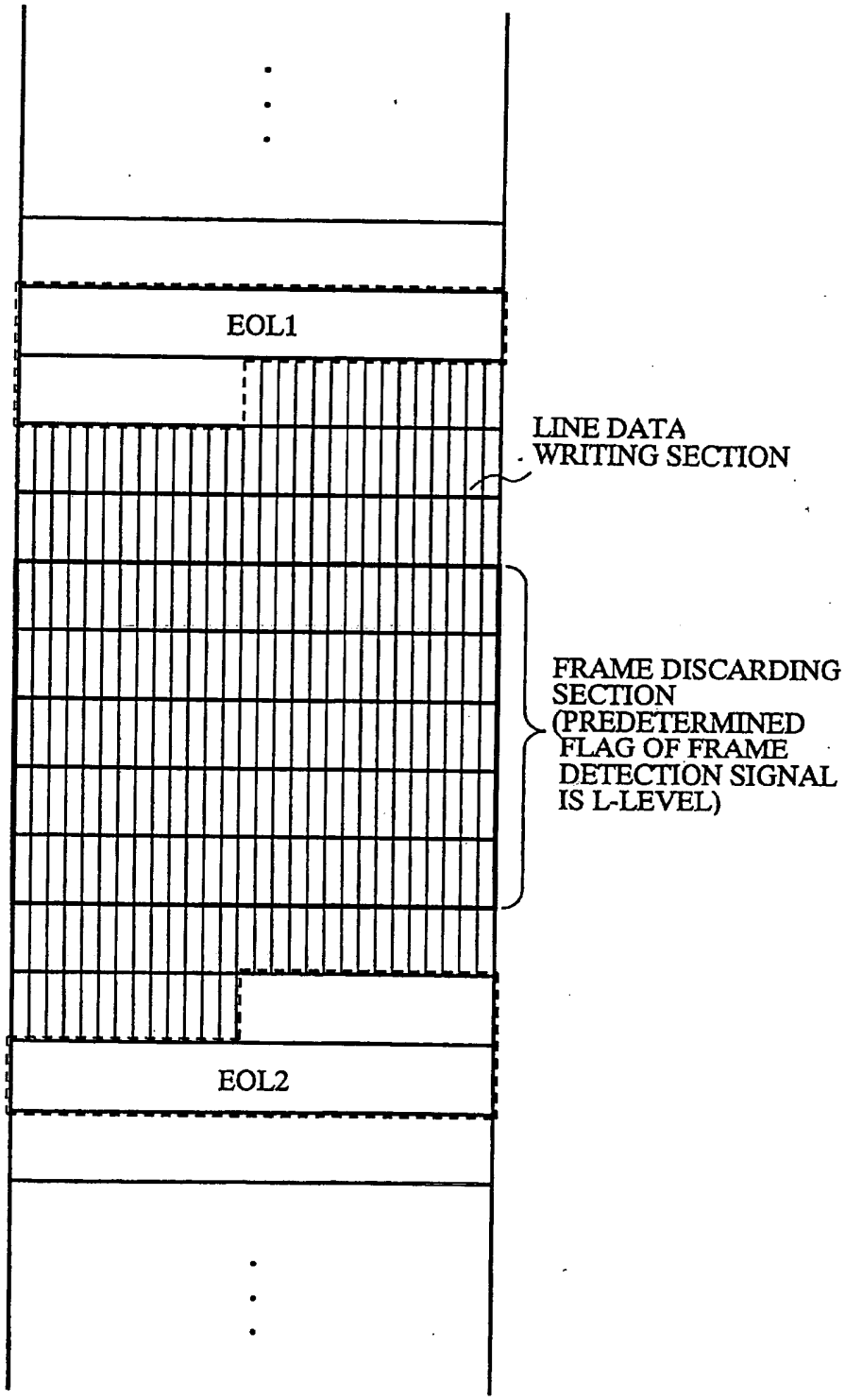

EOL1
LINE DATA WRITING SECTION
FRAME DISCARDING SECTION (PREDETERMINED FLAG OF FRAME DETECTION SIGNAL IS L-LEVEL)
EOL2

FIG.12

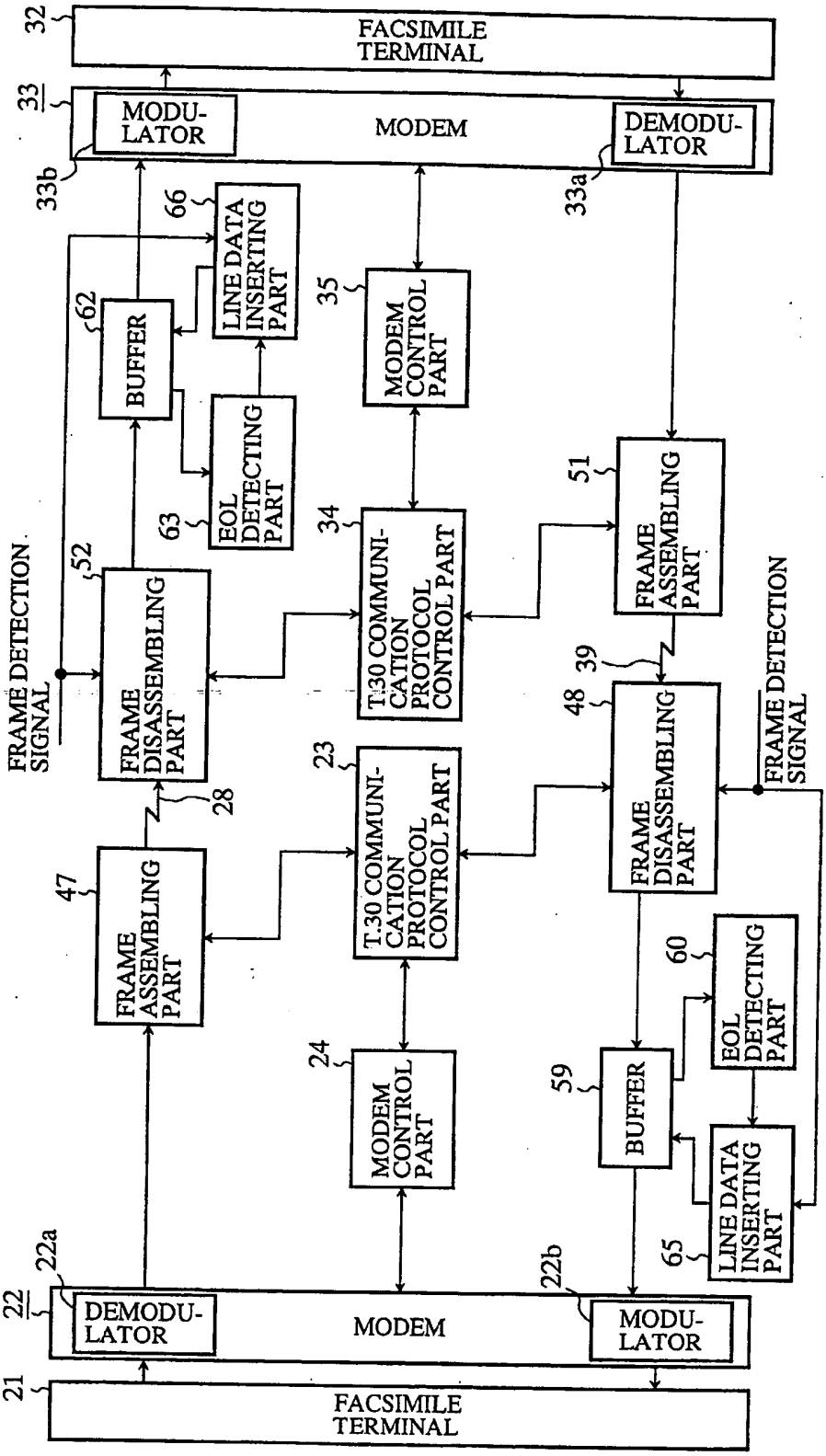

32
FACSIMILE TERMINAL
33
MODU-LATOR
MODEM
DEMODU-LATOR
33b
33a
66
LINE DATA INSERTING PART
62
BUFFER
35
MODEM CONTROL PART
63
EOL DETECTING PART
34
T.30 COMMUNI-CATION PROTOCOL CONTROL PART
51
FRAME ASSEMBLING PART
52
FRAME DISASSEMBLING PART
FRAME DETECTION SIGNAL
39
48
FRAME DISASSEMBLING PART
FRAME DETECTION SIGNAL
23
T.30 COMMUNI-CATION PROTOCOL CONTROL PART
28
47
FRAME ASSEMBLING PART
60
EOL DETECTING PART
24
MODEM CONTROL PART
59
BUFFER
LINE DATA INSERTING PART
65
22a
22b
22
DEMODU-LATOR
MODEM
MODU-LATOR
21
FACSIMILE TERMINAL

FIG.13

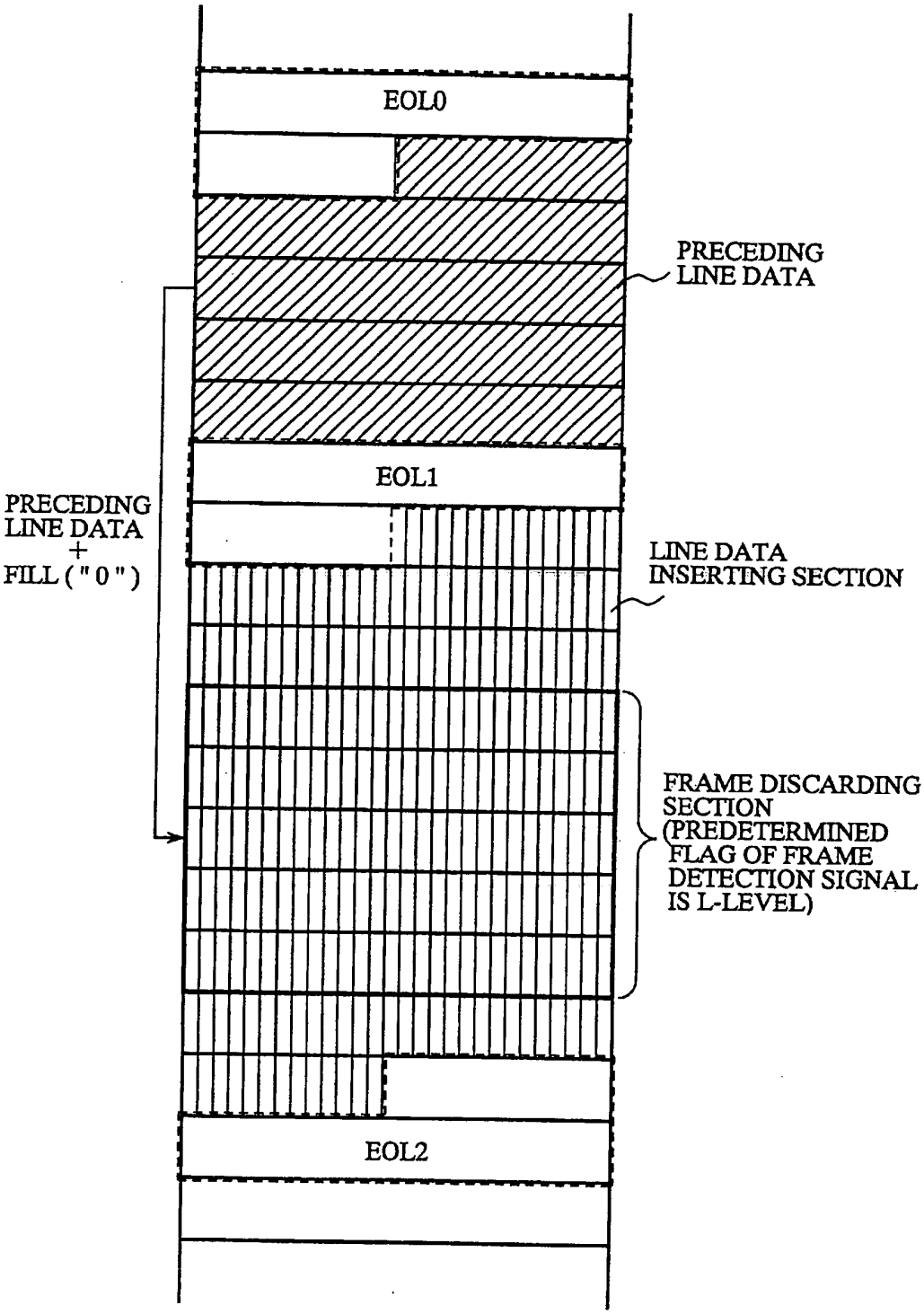

EOL0
PRECEDING LINE DATA
EOL1
PRECEDING LINE DATA + FILL ("0")
LINE DATA INSERTING SECTION
FRAME DISCARDING SECTION (PREDETERMINED FLAG OF FRAME DETECTION SIGNAL IS L-LEVEL)
EOL2

FIG.14

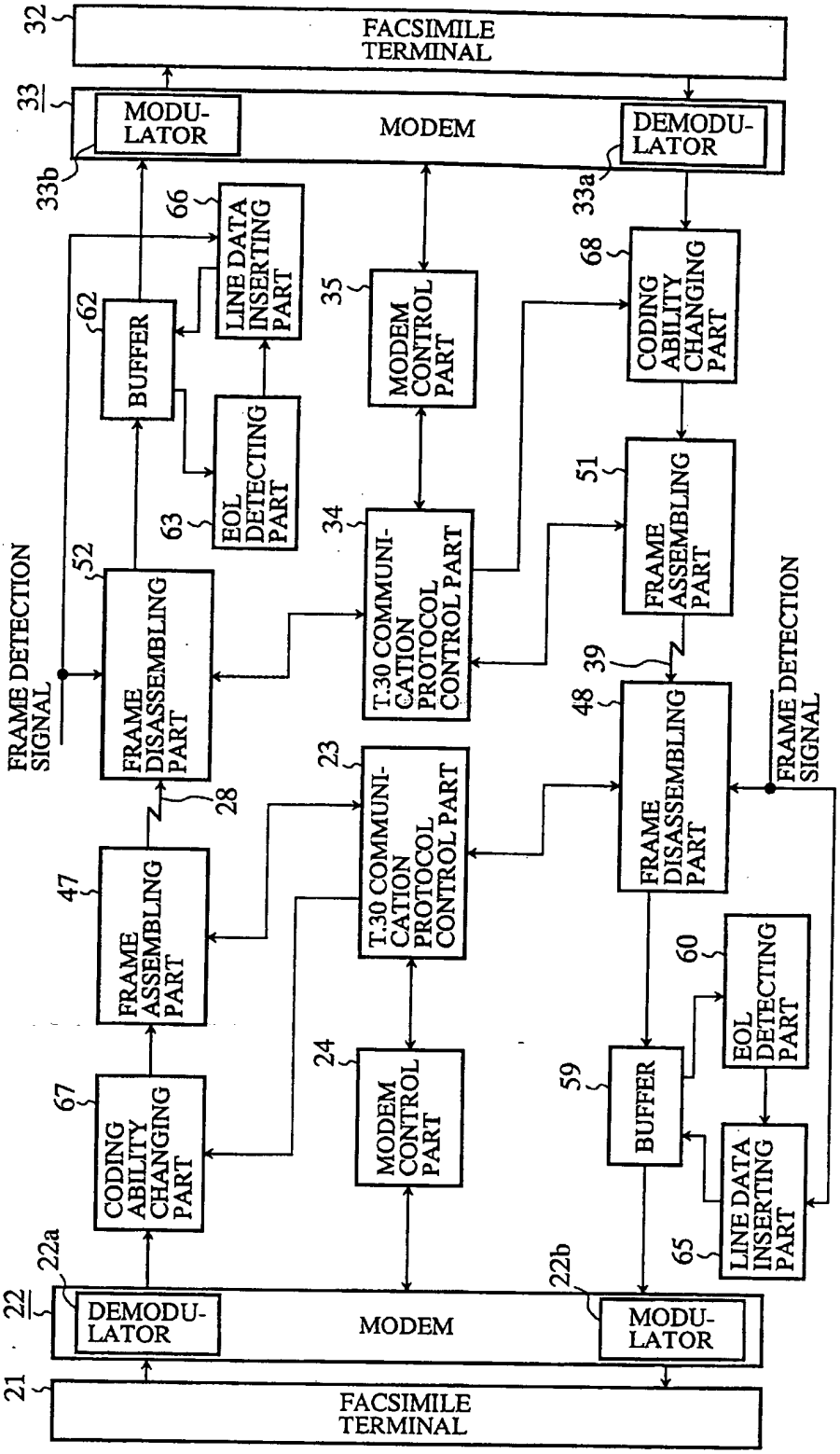
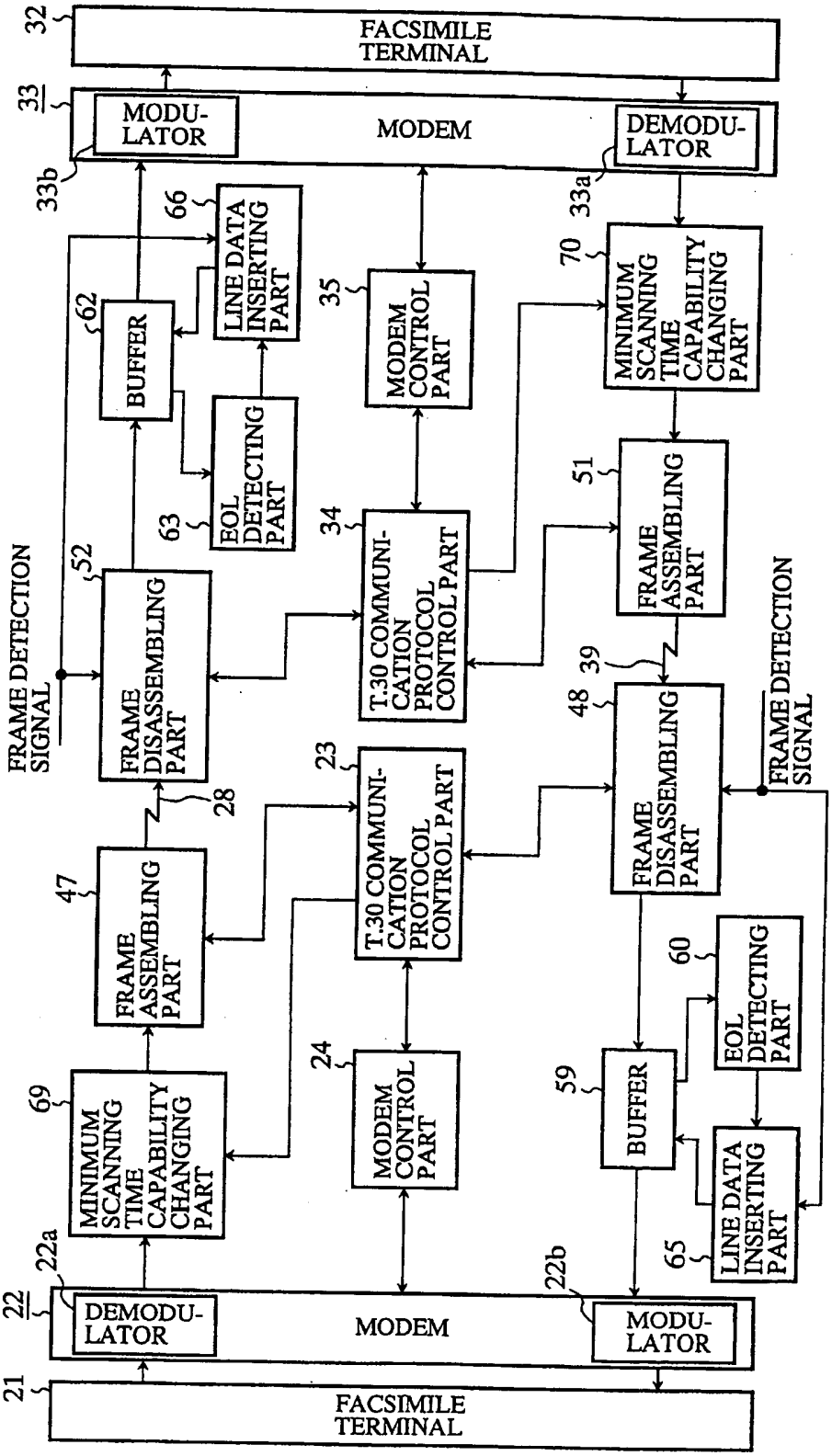

32
FACSIMILE TERMINAL
33
MODU-LATOR
MODEM
DEMODU-LATOR
33b
33a
66
LINE DATA INSERTING PART
62
BUFFER
35
MODEM CONTROL PART
68
CODING ABILITY CHANGING PART
63
EOL DETECTING PART
34
T.30 COMMUNI-CATION PROTOCOL CONTROL PART
51
FRAME ASSEMBLING PART
FRAME DETECTION SIGNAL
52
FRAME DISASSEMBLING PART
28
23
T.30 COMMUNI-CATION PROTOCOL CONTROL PART
39
48
FRAME DISASSEMBLING PART
FRAME DETECTION SIGNAL
47
FRAME ASSEMBLING PART
60
EOL DETECTING PART
24
MODEM CONTROL PART
67
CODING ABILITY CHANGING PART
59
BUFFER
65
LINE DATA INSERTING PART
22a
22b
22
DEMODU-LATOR
MODEM
MODU-LATOR
21
FACSIMILE TERMINAL

FIG.15


32
FACSIMILE TERMINAL
33
MODU-LATOR
MODEM
DEMODU-LATOR
33b
33a
66
LINE DATA INSERTING PART
62
BUFFER
35
MODEM CONTROL PART
70
MINIMUM SCANNING TIME CAPABILITY CHANGING PART
63
EOL DETECTING PART
34
T.30 COMMUNI-CATION PROTOCOL CONTROL PART
51
FRAME ASSEMBLING PART
FRAME DETECTION SIGNAL
52
FRAME DISASSEMBLING PART
39
48
23
28
47
FRAME ASSEMBLING PART
T.30 COMMUNI-CATION PROTOCOL CONTROL PART
FRAME DISASSEMBLING PART
FRAME DETECTION SIGNAL
60
EOL DETECTING PART
69
MINIMUM SCANNING TIME CAPABILITY CHANGING PART
24
MODEM CONTROL PART
59
BUFFER
22a
22b
65
LINE DATA INSERTING PART
22
DEMODU-LATOR
MODEM
MODU-LATOR
21
FACSIMILE TERMINAL